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ITEMS OF INTEREST.

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Thots from the Profession.

GOOD RESOLUTIONS.

There are certain epochs in the history of our life which are marked or distinguished by some circumstance which seems to awaken us to the importance of attempting a more useful or a more energetic life. We are aware of our deficiencies to a sufficient extent to induce us to make resolutions for the future. We regret we have allowed this habit of procrastination to steal away so much of our time, and we resolve we will do better in the good time which is fast coming. We resolutely determine we will devote ourselves to study and mental improvement, and we grow elated with the standing and respect which we already can discern in the future awaiting us. We contemplate with much satisfaction our future triumph, and we grow philanthropic as we dream of our probable future usefulness. But we soon find ourselves again engaged in the old routine of business and pleasure, and our ambitious projects are again forgotten, till some new exciting cause stirs us once more to make a similar effort, which usually terminates in the same way, till old age creeps on us apace, whitens out our locks, engraves his wrinkles on our brow, dims our senses, and we look back with useless remorse at the past, and gaze on the future without satisfaction, if not with painful forebodings as to its fearful mysteries. We now feel that our life has been illy spent, and sinking into the grave, we are forgotten, and the world is no better than if we had never been.

We will leave these "glittering generalities," and consider, in this connection, the common, every-day duties of life. We will suppose we have just returned from a session of one of our State Societies, and we have made numerous resolutions in regard to our future practice; we have been admonished by a view of some fine operations which we have witnessed during the clinics, that our fillings have hitherto been inferior to some others, and we determine that this shall not be so in the future. We also resolve in every case on which

we operate in the future the operations shall be such as our best judgment shall determine on, and we will make careful examinations of all cases, and only act on careful deliberation. We return to our home anxious to begin the new life we have sketched, for we are painfully aware that in the past we have failed in some of these particulars, and we now find ourselves admiring the beautifully finished and artistic fillings of the future—not only splendid fillings, but whole mouths—which show that the utmost care has been bestowed on every diseased condition, and as we dismiss the case in perfect health, we feel a pride and satisfaction in our success we could not have fully appreciated before. All this has, however, transpired before we have resumed our labors. It is as yet in the future, but we are confident in our ability, and sure of our determination to carry it out and achieve a real triumph. A patient presents himself, and we examine the case with care and circumspection, and determine on the course of treatment, after deliberation, and we proceed to operate. We excavate a cavity with much more than ordinary care. Margins of the cavity, which are as smooth and as well finished as we were accustomed to prepare them before, are now subjected to a searching scrutiny, and the slight defects which a magnifier reveals are carefully removed, and the filling inserted with much greater care than heretofore, so that when it is cut down and polished, the margins of the filling, as well as the surface, seem to be faultless. We gaze on it with admiration. Our patient has thus far proved *patient* indeed, and the whole operation has been entirely satisfactory to both patient and operator. But "a change comes o'er the spirit of our dream;" another patient is seated in our chair and we resume our labors. Encouraged by the brilliant success which we have just achieved, we were prepared to excel, if possible, our former effort. We proceed to excavate a cavity, and after a few minutes' careful manipulation, designed only to accustom our patient to the use of the instruments, and just as we are about to commence in earnest, our patient enquires with a good deal of interest if we're obliged to cut it any more, and states very confidently she thinks it has been cut and scraped enough. We encourage her the best way we can, and proceed as cautiously as possible to prepare the cavity for filling. We find, however, the cavity is of such shape that it is impossible to fill it without a considerable amount of cutting, and every time we attempt to cut into the dentine to improve it in any respect, we are met with so much opposition and complaint from our patient we make no progress. The teeth are of hard structure, as well as exceedingly sensitive, and all attempts to dull the extreme sensitiveness of the dentine are futile. We suggest that our patient take gas, and allow us to cut it out in a few seconds with our engine, but she is

afraid of gas. We might reduce this extreme sensitiveness perhaps by the use of creosote, or chloride of zinc, but that would require time, and our patient must leave by the morning train, and she has three or four cavities which need filling, and, more than that, we need the twenty or thirty dollars which we shall receive for the operation as soon as it is finished. We examine the cavity carefully now after having spent an hour over it, and still find it in a very different condition from what is desirable, and so shaped that it is not very probable a first-class filling can be inserted. All attempts to improve it seem hopeless, and we finally come to the conclusion that with the slight retaining points which we have, extraordinary care in filling may enable us to make a tolerably safe operation. We proceed to fill, and find our patient so restless that very accurate and careful manipulation is well nigh impossible, and we are constrained by complaints, which are neither few nor flattering to ourself, to proceed as rapidly as possible, and before we finish packing the gold, we conclude that this case, being a very extraordinary one, had better be finished up as well as the circumstances will admit, and we will put off till to-morrow the commencement of our faultless career as an operator. The other cavities are gotten through with some way, we are not very particular how, as we cannot make a fine operation of it now, and then it is not our fault, and to-morrow we will commence in earnest to make every operation such as we know it ought to be.

The next day we have a patient who belongs to one of the wealthiest and most influential families in the city, and we are determined to make an operation that will do us credit. We examine the mouth, and find a dozen cavities or more that need attention, and the young lady patient remarks that her sister and brother both need the services of a dentist as badly as herself. She observes also that Mrs. M. recommended her to come to us, assuring her we would fill her teeth without hurting her in the least. We assure her we will fill her teeth with as little pain as possible; but she declares if it hurts she will not have it done at all, as she cannot bear to be hurt. We select a simple cavity, and as it is not sensitive, succeed in filling it pretty nearly to our satisfaction. It is true, if we had felt free to proceed exactly to our desires, we should have expended a little more force in consolidating the gold, and the finishing up of the filling would have been a little better, but, on the whole, we could hardly complain. Our next effort was not so fortunate, for tho we succeeded in preparing the cavity well, when we impacted the gold we were forcibly reminded that if we desired to do the large amount of work which the whole family needed, and which, we well knew, they were abundantly able to pay for, we must fill this lady's teeth without pain. The second cavity

was not consolidated quite as well as the first, tho we expended all the time and force on it we deemed safe, for we were reminded during the operation that we were in arrears a month or two for rent, and that our last month's groceries were not yet paid for, and it seemed absolutely necessary to secure the good will of our patient, even if we could not quite work up to our standard on the present occasion. We proceeded with the other cavities, and filled them without causing much pain, with much better satisfaction, however, to our patient than to ourself, as we found we were obliged to postpone for a considerable time our cherished project of performing only splendid operations.

The sister appeared in due time, and was operated on in like manner, tho she was more apprehensive still of being hurt, and it was with a very great feeling of relief that we finished the last member of the family, and commenced again to reform; but difficulty after difficulty has presented itself to prevent us from the carrying out of our designs thus far, but *to-morrow* we shall begin a new life and procrastinate no more, let what obstacles there may oppose our reformatory designs. J., in *Missouri Den. Journal.*

ARRANGEMENT OF TEETH.

DR. L. P. I. CORKELL.

The *Cosmos* for August contains an admirable article, entitled "Typical Tooth Forms," which is worthy the study of every dentist. I wish to call attention especially to the diagram marked "S," page 614, and the description on the previous page, a careful study of which will be a great aid in the proper arrangement of teeth.

It states that the tips of the six anterior teeth (in nature) form the arc of a circle, the center of which is the width of the central, lateral and cuspid teeth.

A line at right angles to the mediary line, through this center, will pass through the centers of the second bicuspids.

A second line, parallel to this, through the posterior periphery of the circle, will pass through the posterior edges of the second molars.

The teeth in the arch posterior to the cuspids are almost directly in a straight line toward the center of the condyles, being deflected slightly inward at the anterior cusp of the first molar.

In the lower jaw, the four incisors are more nearly in a straight line than the upper incisor, and the direction changes sharply at the cuspid, and then forms a gentle curve along the buccal faces of the teeth.

I would suggest the dentist have a series of tin circles with handles from the posterior edge. Select one for the case in hand by the width

of teeth to be used, remembering, however, that the so common use of *small teeth* where they do not belong would result, under this rule, of very much circumscribing the room for the tongue. I am not sure but it would be the means of teaching some dentists a lesson on this point.

To secure the proper arch to the grinding surface, a simple rule suggested to me by an old practitioner, I have found serviceable, as follows:

Arrange the *ten* anterior teeth so that they will be on a line when placed on a flat surface, and the molars dipping upward on an inclined plane.

Arrange the lower teeth so that when placed on a flat surface only the incisors and second molars touch.

"Circumstances alter cases," so there can be no inflexible rule for the arrangement of teeth, and the dentist must use his judgment. As for instance, in very pointed jaws, especially where the lower teeth remain, and form a V shaped arch, the upper teeth should be so arranged that the centrals are the most prominent, the laterals inside the circle, and the cuspids still farther inside. This is a very common form of natural arrangement.

I would further suggest that the *teeth manufacturers* might study the article referred to with good advantage, especially in the formation of bicuspids and molars. If they follow these typical tooth forms, we should be rid of the numerous imitations of anything but natural teeth. I refer particularly to *plain* teeth, *thin*, *narrow*, too long often by one-third, with the lingual cusps of upper, as well as lower, longer than the buccal cusps.

HOW ARE DECIDUOUS TEETH CAST OFF?

HENRY S. CHASE, M. D., ST. LOUIS.

It is by a physiological process as simple and beautiful as that by which their growth, dentification and calcification take place.

It is admitted by all that *absorption* takes place. Whether this process is excited by impingement of the crown of the tooth or replacement on the roots of the temporary teeth or not, is a disputed question.

My own opinion was expressed on a former occasion, in the following words: "Absorption of the roots of temporary teeth takes place in the ratio of the advancement of the permanent teeth, in the process of eruption, independently of their topographical relations."

ABSORPTION is a vital process and cannot take place in a dead bone, or tooth. Those who deny vital action in calcified dentine, will have hard work to prove that absorption does take place. A dead bone or dead tooth has no more physiological relations to living tissues than has iron or wood.

Physiological processes can take place only in living tissues.

Absorption is a word of ambiguous meaning, in its histological sense, in reference to the removal of the roots of teeth. At least most men seem to have no definite idea of the manner in which it takes place.

Absorption of the nutrient elements by the intestinal villi, is a mere reception of those elements into the pores or open mouths of the columnar epithelium of those villi. Absorption of water by the skin is an endosmosis, an active osmotic action in the cell walls or membranes of the skin.

ABSORPTION OF DENTAL TISSUES in deciduous teeth is a *retrograde* physiological process.

It is a work done neither by the dental blood vessels, the gum, a "carneous body," or by any other tissue or organ; but it is a work performed by the tooth itself.

Modern discoveries in physiology have demonstrated that all the active processes of life take place in the *ultimate* anatomical organs, which are *cells*. I shall assume the reader is acquainted with cellular physiology, for without this knowledge an intelligent understanding of the beautiful and delicate process of growth, disintegration and decay must ever remain to him an unknown world.

THE PROCESS OF ABSORPTION.

The first thing which we observe on the extraction of a milk incisor in which this work has commenced, is a shortening of the root. The calcareous matter is gone, and so are the distinctive dentinal and cemental tissues. There are neither dentine tubes nor bone corpuscles left in the bottom of the alveolus; but in their place a mass composed mostly of histological connective tissue. The peri-cementum or alveolar dental periosteum is the first to change itself, and also to initiate change in the osteoid root itself.

The process commences near the *end* of the root, tho it sometimes does higher up on its lateral sufrace. The Dental artery which supplies the root remains intact after considerable progress has been made in the work of metamorphosis. The arterial radicals of the peri-cementum enlarge, they carry a greater amount of blood than before; especially is this the case when the Dental artery has been destroyed by impingement of the crown of the tooth of replacement against it. These arterial radicals lengthen also as the process of metamorphosis goes on, so that the vessels are always near the scene of action to carry food for the work, and also to remove effete materials.

Simultaneously with this work going on in the root, a change takes place in the Dental pulp; the cavity in which it is situated enlarges in every direction, and particularly toward the distal portion

of the crown, so that the horns of the pulp reach nearer the grinding surface of the crown than before. As this process proceeds, the pulp itself grows larger in corresponding directions, and keeps even pace with the enlargement of the cavity, so that its cells are always in contact and union with the unmetamorphosed portion.

As the root is more and more removed, the space which it occupied is filled with bone which has been differentiated from connective tissue. The bottom cells are changed to bone corpuscles, and ossification proceeds in a ratio corresponding to the change of dentinal tissue into connective tissue cells.

When the process is ended in the entire loosening of the crown, so that it falls out with a slight touch, we see that the connective tissue of the alveolus is continuous with that of the gum, and to the naked eye the highly vascular mass of cells on which the crown rested looks like the gum deprived of its epithelium. On a close examination it looks like the healthy granulation of an ulcer or wound.

If the process has extended to completion, we find on examination of the crown that most of the dentine and considerable of the enamel has been absorbed or metamorphosed.

HISTOLOGICAL CHANGES.

The bone corpuscles of the cement change their shape and become connective tissue cells, the latter proliferate, so that all the space is occupied with cells. The dentine tubes, also, are gradually changed into the same kind of cells as those of which they are composed before dentine tubes were formed, namely: connective tissue cells. The same changes take place within the pulp cavity, the metamorphosis commencing next to the pulp, and the latter grows in size by a transformation of dentine tubes into connective tissue cells, of which the pulp is composed, and from which the dentine tubes were originally differentiated. At the bottom and sides of the alveolus, the cells of connective tissue are gradually changed to bone corpuscles, and then the intercellular space is filled with calcareous matter, and true bone is formed.

It is difficult to decide whether the walls of the Dental tubes and cement corpuscles liquify and pass by osmotic action into the connective tissue cells with which they are in contact, or whether, the differentiation of cells really takes place.

The cell multiplication which takes place in the peri-cementum and pulp, looks like the former, and yet the latter would seem the more natural process. It is quite probable that both processes exist in the changes which occur. It is not likely the nuclei of the cells forming dentine are destroyed when the tubular structure takes the place of the cellular. In other tissues we find the nucleus thrust aside against

the cell wall when some particular function is to be performed and cell multiplication has ceased. This takes place in bone, articular cartilage, the nails, etc. The application of some chemical agent, sometimes an acid and sometimes an alkali, will generally bring the nuclei to view under the microscope.

I have spoken of the changes which occur, just as tho no tooth of replacement occupied the alveolus of the milk tooth, as its root is being removed. This was to simplify the process. This sometimes happens in fact, tho almost universally the tooth of replacement follows closely on to the metamorphosis of the root. All space, however, not occupied by either tooth, is filled with bone or else transitional tissue.

I have said that cellular activity is going on *within* the tooth at the same time as it progresses without. We sometimes observe that the former process outstrips the latter, and then the crown frequently falls off, leaving the roots in their alveoli unabsorbed, tho this does not hinder their removal by cell action, for it still goes on till the smallest particle of root is removed.

How happens it then that portions of milk roots are often left in the gums without absorption? It is because they are necrosed, dead. We know that frequently the whole tooth is necrosed from decay and suppuration. In this case no portion of it is absorbed, but the whole is thrown off from the system as a foreign body, either in mass or by chemical disintegration. What happens when the pulps have been destroyed and removed from milk teeth, and the cavities plugged? Absorption then takes place in the roots alone, and the crown is consequently retained longer in the jaw than when the pulp is left to act its part also.—*Missouri Dental Journal.*

WHAT WE MOST NEED.

DR. G. W. DE CAMP.

For centuries man seemed inclined to follow the mad experiment of living without "thot."

The Reign of Terror was but action void of "thot." France might have been blest had the Jacobins been guided by reason. Was it not by close "thot" that Luther turned things upside down and confounded the Pope? What was it that enabled Cadimus to grasp the keys with which he unlocked the store-house of the immortal mind? How did Bacon show the fallacy of Grecian philosophy? How did Newton tell of the stars, and trace the law of gravitation in the falling apple? What nerved the hand of Franklin to grasp the thunderbolts from the armory of Heaven? Was it not "close thot?"

We want independent thot. "It has been said independent thinkers are few, and most philosophers found their philosophy on the

opinions of former philosophers." "There is nothing new under the sun." Creation gives God as the author of all, but tho we may not claim originality among men, yet old thots may be clothed in new garbs, and beautified as the husbandman beautifies the earth. Not by relying on others for opinions, or by copying some writer, or by taking a sentence here and there, combining them, and calling it an "original communication;" nor yet by taking other's thots, and imagine you can vend this second-hand furniture, and not be stamped a "plagiarist."

We need singleness of thot. Not that man should have but one thot, and travel on in the same old way—like the good old parson, of whom it is said he preached fore-ordination from every text. Thots must be mastered one at a time, otherwise all will be lost. I think it was Franklin who told of a child who having an apple in each hand, tried to carry a third, and lost all. The old hen picks up grain by grain.

We need concentrated thot. The mind must be subject to the will, so that all the faculties may obey the call, rally to the rescue, grasp the subject, and not let go till the victory has been won. Small squads of soldiers may gain small victories, but it is only by a concentrated force that the lines are broken and conquered. We need continued thot. What would a machine of great power and speed be worth if it worked but at times? The patient who takes medicine to-day and neglects it to-morrow, will surely come to grief. Tension breaks the bow, but thot strengthens the mind. It is by continued action that water wears the rock. As a fixt habit may become a necessary part of the existence, so may continued thot become a fixt habit. Then, instead of our finding thot a friendless outcast, we will be welcomed to her hospitalities, and find ourselves pleasantly entertained by her memberless friends.

One thot begets another. It is never found alone, but always in company with its relatives.

We need patient thot. Man has been defined as a religious animal, the laughing animal, the weeping animal, the whittling animal, and by Solomon's admonitions, by inference the lazy animal.

Many strong minds have given up the search for truth, on account of its tiresome paths, who might have blest humanity if they had nerved themselves to patient toil. By close thot we purify our minds, and are able to see the little things which God has clothed in so much beauty. The farmer considers the geologist a fool, as he looks at him carefully examining the little stone—he could have shoveled a dozen cart-loads of them, or plowed a half dozen acres in the same time. Close thot is needed, to impart instruction aright. True,

some men's happiest efforts are made at an unexpected moment, but shall ordinary minds wait for poetic breathing?

What will follow if our thots are not independent, single, concentrated, continued, and patient, is to be seen by the present.

The advantages of the day are great. No man can have a reasonable excuse for not being able to "act well his part." Colleges are not appreciated. They are valuable, but cannot supply the place of thot; but thot can, in one good degree, supply the place of colleges.

There are some, it would seem, who write simply that their names may appear in print. Their whole object is to let you know that *they* live. From their writings we are led to suppose that they oil the "*hub*" of the universe, and without their help things would come to a stand-still, and like the fly on the horse's harness, exclaim; "What a great dust we make."

We look to our journals as our hope. Let what is to be published be written with thot—close thot. Let none use it as an instrument to injure his brother. Men, when they wish to write like fools, should write for "Artemus Ward's book." All such should be regular subscribers for "Ward" or "Nasby," but not contributors to a journal of the Dental profession. They trail her robes in the mud. The times demand a higher grade of dental literature.—*Dental Register.*

INTENTIONAL DEVITALIZATION OF THE DENTAL PULP.*

WILLIAM H. TRUEMAN, D.D.S.

The difference between the condition of a tooth and its surroundings where devitalization has been the result of progressive pathological changes, and a tooth where this condition is the desired result of therapeutic treatment, is so great that I have considered it worthy of separate and distinct consideration. In the first instance our most earnest efforts are directed to combat pathological conditions, either active or passive, already existing; in the latter, while we may not in all cases safely say that no pathological lesions are present, our efforts are mainly to anticipate, to prevent irritation, and to place the tooth in a condition as nearly normal as the mutilation it has suffered will permit.

I propose to confine my remarks to teeth that have been intentionally devitalized, the pulps being removed and the pulp canal filled before any degenerative action has resulted from their devitalization; my purpose being to call attention to lesions that often exist, and which are the frequent cause of ultimate failure in this operation, notwithstanding the complete removal of the devitalized tissue and the thorough occlusion of the space it occupied.

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* Extract from a paper read before the New Jersey State Dental Society.

It is seldom that we are called on to devitalize a tooth that is quite normal. Except preparatory to constructing a piece of bridge work, I can think of no instance in which it is likely to be done. There is usually, if not always, some previous lesion, such as inflammation, a slight, or extensive exposure of the pulp; extensive caries without pulp exposure, devitalization being deemed expedient to secure reliable anchorage for the filling, or preparatory to inserting a crown, etc. In all such cases there is some *active* pulp irritation that may or may not prove a detriment to the future usefulness and comfort of the tooth.

Devitalization may be necessary to relieve pain caused by ossification of the pulp, encroachment on the pulp by secondary dentine, etc. These conditions, except that they may render more difficult the complete removal of the devitalized tissue, are not usually serious complications. The formation within the substance of the pulp of nodulary dentine, a condition that, when requiring treatment at all, imperatively calls for devitalization, is much more serious. These cases, when demanding treatment, are at times most obscure and unsatisfactory; and it is seldom they can be successfully treated.

Considering the ultimate result of treatment, I now pass to a more serious condition, viz.: where there has been active inflammation of the pulp. In these cases, whatever may have been the cause of the inflammation, whether the near approach of caries, violence, or thermal changes, devitalization usually gives present relief; but it does not always arrest the pathological changes caused by pulp irritation. They may indeed be for the time arrested; that does not, however, insure the parts returning to a normal condition. In many cases the injury done is never fully repaired. We must remember the peculiar anatomical conditions here existing—conditions existing nowhere else in the human body. Within the soft tissues distending vessels meet with but little resistance, the adjacent tissues permit increase of calibre and serious effusions with impunity; but around the apex of the root, surrounded as it is by practically unyielding bony walls, this can take place only to a limited extent, without being accompanied by serious injury that will remain long after the cause producing it has ceased to exist.

In most cases, we may perhaps say in all, where intentional devitalization of the dental pulp is necessary before filling a carious cavity, some irritated condition of the pulp is present. Where this is confined to the pulp, we may perhaps say *when it is*, it is of little moment. I have no doubt this is sometimes the case. I have no question but that, independent in a measure at least of the treatment we may adopt, or its thoroughness, on the presence or the absence of this primary irritation, the success or failure of the operation largely depends. Treatment,

however, is important; careful and thorough treatment will be followed by correspondingly good results.

It is contended by some that after the tooth is matured the pulp is not of importance. This I do not believe; but, admitting that this is the case, I contend that its devitalization is a serious matter; not so much on account of its value to the tooth, but on account of the risk of injury to the surrounding parts by its removal.

After devitalization the well-being of the tooth is still further risked by the difficulty of removing the dead tissue and thoroughly filling the space it occupied. The change that must take place in the tissues around the apex of the root, owing to the circulation of the pulp being cut off, and the nutrient fluids compelled to seek other channels, often gives rise to serious trouble. When we have done all that care and skill can do, the comfortable usefulness of the tooth depends largely on nature's toleration of the mutilation the tooth has suffered. We must expect occasional failure, partial or complete.—*Archives.*

THE HABIT OF SMOKING.

JACOB ITER, COTTAM, INDIA.

DEAR SIR:—It is painfully evident that the practice of smoking tobacco is very prevalent in many places among the boys. They seem to think it a manly habit, and that it cannot be wrong to imitate the example of those who are older and wiser than themselves. They should consider that the poisonous active principle of tobacco is in an adult smoker met, and to some extent neutralized, by the resisting forces of the matured human system, but in the young it does its ruinous work unimpeded. Again, they should constantly remember that it is much easier to acquire a bad habit than to abandon one. On account of the imbecility of depraved men they find it exceedingly difficult to extricate themselves from the powerful grasp of an evil habit in which they have long indulged.

> "They know the right and approve it too,
> Condemn the wrong, and yet the wrong pursue."

The late celebrated Rev. Robert Hall was an inveterate smoker. A friend kindly lent him a work written by Dr. A. Clarke, strongly condemning the habit of smoking. Mr. Hall read the work and returned it, remarking, "It is as impossible to refute Clarke as it is for me to give up the habit." I know it is contended that in some cases smoking has proved beneficial. I fear, however, that in most cases the remedy will be worse than the disease. This reminds me of a woman who poured oil on a nest of hornets on the exterior of her house and applied to it an ignited match; she thereby killed the hornets but damaged

her house, which would soon have been consumed if her neighbors had not succeeded in extinguishing the flames.

Now, boys, please read the following quotations, and resolve that you will henceforth avoid smoking and chewing tobacco. A writer in the Buffalo *Medical Journal* wisely remarks: "The use of tobacco is bad enough when begun in mature life, but it is infinitely worse when the foundations of the habit are laid in early youth." In a book entitled "Home and Health," we are informed that a "distinguished French physician (M. Decaisne), investigated the effects of smoking on eighty-six boys, between the ages of nine and fifteen, who were addicted to the habit. Twenty-seven presented distinct symptoms of nicotine poison. In twenty-two there were serious disorders of the circulation, indigestion, dulness of intellect and a marked appetite for strong drinks; in three were heart affections; in eight decided deterioration of blood; in twelve there was frequent epistaxis; ten had disturbed sleep, and four had ulceration of the mucous membrane of the mouth."

Dr. B. W. Richardson, of London, England, in a recent work on "Nervous Diseases from Tobacco," remarks that "The effects of tobacco are especially injurious to the young who are still in the stage of adolescence." Even the "organ of the tobacco trade" admits that "few things could be more pernicious for boys, growing youths and persons of unformed constitutions, than the use of tobacco in any of its forms." I once informed a minister, who was an obstinate smoker, that tobacco smoke inhaled by my wife operated on the contents of her stomach like a dose of tartar emetic, and I begged he would not smoke again in her presence. He became very angry and disbelieved my statement. I asked him why he smoked? He promptly replied, "Because I like it." Boys, think of that answer, and avoid smoking lest you become as depraved and despicable as those who, because *they like it*, will not cease to puff their sickening "vapors and pillars of smoke" into the faces of those who do not like it.—*The Watchman*, India.

[And we that are older,—why not be men, and not great boobies of children, whining because "we can't help it?" Such nonsense! We can break ourselves of any evil habit that we *will* to. The idea of deploring that our children, or anybody's children, are so naughty as to follow our example! Of course they will, and we ought to be ashamed of ourselves to give them the example.—ED. ITEMS.]

If asked what, as the result of my experience, is the greatest pleasure of my life, I should say, doing good to others. Not a strikingly original remark, perhaps, but seemingly the most difficult thing in the world is to be prosperous and generous at the same time.—*George W. Childs.*

MAKE THE FOUNDATIONS FIRM.

DR. G. W. DECAMP.

If a young man persevere, I ask not the measure of his brain. He has a sure passport to success. If the heavens should fall, they would find him on the way to mental excellence. Throw away the false idea that "circumstances make the man." Man is the builder of his own fortune. There are no beds of ease on which to carry drones to victory. Difficulties must come, as smoke flies upward; that is by a law of nature. They are blessings; they stimulate to greater action, and teach the mind to conquer. By them its powers are developed.

What makes the Indian swift on foot, but the fleetness of the deer? The eye of the hunter is keen, because of the shrewdness of the game. The weight of the hammer gives strength to the blacksmith's arm. Who are the deepest reasoners, but those who have dared to wrestle with great difficulties. What would the foal of the racer know of its power, if kept with the common herd, destined for the yoke: Difficulties arouse to action. Actions make the man.

That the mind may grow, it must be nourished. Man would not thrive if fed on apples. He needs a variety. The sciences are the food of the mind. Restrict it to any one, and it will become weak. The eye of the criminal confined to his cell is not as strong as that of the sailor, who looks from the mast-head.

It is not only necessary for all who intend to practice the science of Dentistry to be learned in what directly pertains to it, but they must be *educated.*

Some may object, by saying that it is not necessary. They will tell me our fathers were not learned; that some of the brightest stars of the present entered the profession illiterate; and, with a great degree of satisfaction, fold their hands for a *little more sleep.* Thus would they block the wheels of progress, and be banished to everlasting ignorance. Should we live in log huts because our fathers did? Should we refuse to improve our advantages because our fathers had them not? No! No! In the name of our God we cry, No! Deny me any pleasure, but deny me not the use of what I have and what I can get by my best endeavor. Talent is adverse to ignorance. Our advantages are greater than our fathers'; and tho some of them, by herculean efforts, stand among the clouds, many worship at the shrine of ignorance. Our fathers improved what they had; we should do likewise. If we do, we shall be *better* than *they.* We must be *wiser* or *more ignorant.*

The position and respect with which the title of D. D. S. is intended to command should urge a thorough education. If we respect ourselves we must aim at mental and moral excellence above

our patients. Our land is covered with colleges, where the young may learn to think. There is no excuse for ignorance, when good books, the products of the richest minds and the labor of many years, are within the reach of all. If a thorough preparation is made, those who enter our profession may bless it, bless humanity, and be blest of God.

That we may be, *Resolved*, That we individually recognize it to be our duty to earnestly constrain all who intend to enter our profession to educate themselves, so they may be prepared to pursue a regular course of study in some dental bollege, in connection with private instruction. This is my hope.—*Dental Register.*

THE DENTAL PROTECTIVE ASSOCIATION.

First, What is the object and what is this Protective Association of the United States? Heretofore, you will remember, when we wished to defend ourselves it has been by subscription, always costing the individual much more than the small sum that is asked here. After casting about it seemed necessary to form a permanent organization, and under competent legal advice we formed a corporate body under the laws of the State of Illinois, which required we should have a board of directors. These are the responsible parties for the body. It leaves the members free from any harassment if such an attempt is made, leaving it for the board of directors to do the work and receive the brunt of the attack if it comes from the opposition. Now, all who have examined the plan of organization will see that the membership is on a basis of ten dollars. Each member signs the constitution and by-laws and pays ten dollars. In signing you agree to submit to a further assessment of ten dollars. There are enough men in the dental profession who will come into this organization to preclude the necessity of further assessments.

The object of the Protective Association is, first, to take care of what is generally admitted to be an imposition on the dental profession —the subject of the International Tooth Crown Company's patents. The International Tooth Crown Company, as you know, own several patents: I think I have the record of twenty-six in my satchel. It is true many of these patents in themselves are harmless—that is, they are harmless if you have any means of defence. The International Tooth Crown Company have a decision on one patent in their favor, and that is the gold bridge patent. In their suits, which were held in New York, that was the only patent in which they were sustained. The other patents this company have taken to the Supreme Court of the United States, where the suits are now pending. Besides this bridge, they have a large number of patents, many of which seem to me

amusing. They start out with patents, and name them as "preparation of roots for crowns," patents for "cutting off teeth," patents on "destroying the pulps—driving it out." There is also a patent on filling the end of this root, as the patent describes, before there is any danger of inflammation or suppuration. I do not know whether it is the danger of suppuration you are to avoid or whether it is the cedar stick driven into the pulp cavity. They have a patent on freezing a tooth so it will not be sensitive; also another on cementing a pin or post into the root of a tooth. They have, in addition, a patent on filling teeth with some fibrous material; also many other patents covering crowns—ten, twelve, or fifteen of them—which would seem to cover all the crowns ever invented. These patents on the crowns, if held to be good, would certainly decide that the Logan, Bonwill, and various other forms of crowns are infringements of some of these patents. If we remain quiet and they are sustained, the probability is, they will take up everything else they can buy. They will come around with a mule-team, and if one thing does not suit your case they have another, so that if they come across a man who is not doing bridge-work—perhaps he is destroying nerves—they could torment him and the dental profession, and no individual alone could contest these patents, because it is too expensive. Therefore the necessity of some concerted action by which this imposition can be stopt. It seemed feasible and right that each individual should give his part to the cost. Ten dollars is a small sum as compared with the great amount of good that can come from it in other ways. The Protective Association offer in return for this money and this membership to take care of all suits —guarantee to take care of them, furnish counsel and testimony, and relieve the individual dentist of all expense, bother and trouble. If they are to be sued, all they have to do is to turn over the suit to the Protective Association and allow us to take care of it. This method of defence will make it very effectual.

The dental profession are more ignorant on the subject of law and patents than any other thing. You need not be surprised if the Supreme Court of the United States sustains the patents now before it in favor of the Crown Company. We rather expect it, tho we hope it will not do so; but just as soon as we hear that the Supreme Court has gone against us, that is just the time when we will really begin our defence. If the company have the decision in their favor, then they will apply all through the United States for injunctions against the dental profession, because the profession, as a mass, have infringed their patents. When they do this, it is the object and aim of the Protective Association at that time to prepare a new record and try these cases over on the testimony we have gathered. I have received a large

number of drawings, and the names of the parties who are wearing crowns and bridges, in response to the circular I sent out. It is the purpose of the Protective Association to have a full and complete record ready to bring into court at any moment, in any place in the United States, to apply on the subject, and thus compel the International Tooth Crown Company to fight the battle over, and fight it on the merits of their patents. Before that time comes there are suits now pending in the Supreme Court which the International Tooth Crown Company confidently expect to have decided in their favor. Mr. Offield, on the part of the Protective Association, says: "We must not be surprised, and must be ready for the result." If they continue this suit before the Supreme Court, that only brings the Low bridge up, so it leaves little chance for the profession to have a trial. But we can make them come into court and try the case over. When the suit was tried in New York, of course it was new to the profession, and there was much evidence presented that was not pertinent. The responses of the profession were not very liberal, so it was with my meagre means they accomplished what they did in that suit; and when I speak of that in company with the record of the Protective Association, I do so wishing you to understand that it is not in the form of criticism; but we have been working a long time on this, and we have more to show up the next time.

It is the confident belief of the attorneys of the Protective Association that we have all the evidence necessary to fight every patent now owned by the International Tooth Crown Company, and Mr. Offield is not a man who would speak unadvisedly—*International.*

BLEACHING TEETH.

DR. F. C. KIRK, PHILADELPHIA.

In 1882 I brought to the notice of the profession, in a paper read before the Odontographic Society of Pennsylvania, the results of a method for bleaching teeth which I had used with good results for about a year previously, and based upon the activity of sulphurous acid (So_2) as a bleacher. This substance has a large application in the arts for the bleaching of straw goods, woolens, etc., and its method of action is entirely opposite from that of chlorine. It has a strong affinity for oxygen, and belongs, therefore, to the class of substances which we know as reducing agents, and in its relation to the operation of bleaching teeth I have placed it in the second division of the classification which I made at the beginning of my paper, viz.: bleachers which act by virtue of their affinity for oxygen, and in which class it so far stands alone.

My method consists of liberating sulphurous acid, So_2, from sodium sulphite, Na_2SO_3, by means of boracic acid. The two substances, in the proportion of 100 grains sodium sulphite and 70 grains boracic acid, are desiccated separately, and then intimately ground together in a warm, dry mortar, after which they are kept in a tightly-stoppered bottle for use. In using the powder, the tooth is prepared in the usual way, and carefully dried under the dam. The powder is packed into the pulp-canal and cavity till both are full; the reaction which liberates the sulphurous acid is then brought about by moistening the powder in the tooth with a drop of water, and the orifice of the cavity is immediately closed with warm gutta-percha. The reaction which ensues is as follows:

$$Na_2So_3 + 2HBO_2 =$$
$$2NaBO_2 + H_2O + So_2$$

I have had very gratifying results from this method, and have found where it was at all useful that it bleached through greater thicknesses of dentine in less time than when chlorine was used. It may also be used in connection with steel instruments.

Some discolored teeth resist the action of any bleaching agent to a much greater extent than others; whether it is due to the presence of some substance in the tubuli which prevents the ingress of the bleaching agent, or whether to the existence of some compound which is but slowly acted on, I am not at present able to state. My impression is inclined to the latter view, as I find when the color is brown or yellow, the bleaching is slower and more difficult.

Where I have failed with chlorine I have succeeded with sulphurous acid, and conversely. Quite recently, Dr. Edwin P. Wright, of Richmond, Va., has devised an ingenious apparatus for the application of free chlorine to the teeth for bleaching. It consists of a glass face-piece, to which the rubber dam is attached, making a closed envelope into which the gas is conducted and projected against the interior of the tooth by means of a rubber bulb and tube, terminating in a vulcanite jet. The chlorine is contained in a jar or bottle, which is previously filled with the gas in the laboratory. From this it is pumped through flexible tubing into the tooth, and back to the bottle by means of a return tube of flexible rubber which connects the face-piece and bottle.

Dr. Wright's device marks an advance in the operation of bleaching teeth, as it furnishes us with a means of applying either chlorine or sulphurous acid directly to the tooth without the annoyance of the formation of any side products, which undoubtedly too often interfere with the efficacy of the bleaching agent; and the method is absolutely devoid of any chance of irritation to the air-passages of the patient,

which renders the direct application of these gases practicable,—a result heretofore impossible.

I will endeavor to explain a slight modification in the face-piece which I have made in the arrangement as originally devised by Dr. Wright. A glass vessel, shaped like a bell-jar, of about two inches in diameter and the same in height, with a flange around its base, the upper end terminating like a bottle-neck, is clamped to the rubber-dam, while it is applied to the tooth to be bleached through the agency of a hinged, double-ring brass clamp, and through the bottle-neck end the gas is pumped to the tooth and back to the reservoir. This portion of the device is my own, and possesses the advantage that the ordinary rubber-dam may be utilized, the original apparatus of Dr. Wright requiring a special form of rubber-dam to be prepared for the purpose.

Teeth which have been bleached to a certain point and then return to their original state of discoloration do so, I think, because the operation has not been thoroughly performed, which may mean that the action of the bleaching agent has not been continued long enough, or that the tooth has not been bleached sufficiently high up into the root, or the subsequent filling has not been thoroughly performed. It may also arise from metallic instruments being used in connection with the chlorine process or the subsequent operation of filling.

Another class of teeth which present what I believe to be a fertile source of failure in point of permanency are those in which recession of the gum has occurred till exposure of the cement has taken place to a considerable extent. I have reason to believe that such teeth are liable to re-discoloration by the imbibition of the oral fluids through the cement. While I do not wish it to be understood that I have succeeded in all cases, yet I have such a degree of success that I regard the chemical bleaching of teeth as an operation which is not only legitimate, but should be undertaken in all cases of discolored front teeth, with the expectation of removing one of the most unsightly defects we have to deal with in the human teeth.—*1st Dis. Den. So. of N. Y., in Cosmos.*

Mr. George Muller, who is traveling and preaching among the Himalayas, has written the fiftieth annual report of his famous orphanage at Bristol, England. Since the institution was founded, it has received and spent more than $5,500,000; more than 109,000 persons have been entirely supported and educated in it, and tens of thousands materially assisted; five large houses, capable of affording homes for 2,500 orphans, have been built at a cost of $575,000, and sixty-six schools are now maintained. Yet the institution has never been a penny in debt, and has never directly or indirectly asked for human aid, more than to make a plain statement of its work and expenses.

LORD OXYGEN.

[From an introductory to a course of Lectures on Chemistry.]

DR. GEORGE WATT, EDITOR *Dental Register.*

Man is, to a great extent, a creature of habit. He dislikes sudden changes. The school-boy lingering on the bank, skrinking from the sudden plunge into the cold steam, demonstrates this truth to himself, while the pallid cheek and compressed lips of the commander about to order a charge, demonstrate the same truth to others. A disposition to hesitate precedes all great undertakings; and this is the great cause of that procrastination, known as "the thief of time," which, manifesting itself mainly in reference to repentance and matrimony, peoples this world with old bachelors, and the next with reprobates. About to engage in a great undertaking, shall we not be allowed to indulge in the luxuries of this universal law of laziness? About to embark for a four months' voyage, on the deep sea of an abstruse science, with imperfect charts, and inexperienced sailors, is it any wonder we incline to linger in port, and while away an hour, in view of the long toil before us? Let us, then, prove ourselves members of the great human family of procrastinators, by spending this hour, with less of toil and mental labor than will fall to our lot in the hours which are to succeed it.

But man is also a creature of instinct. He can be taught to know and do many things; but some things he will, and from his very nature, must know and do without any teaching, and even in spite of instruction to the contrary. He eats when he is hungry, drinks when he is thirsty, seeks for warmth when he is cold, and for a cool place when he is hot, not because his reason teaches him to do so, but simply in obedience to the instincts of his nature. Another, and one of his strongest instincts, impels him to worship that which he regards as worshipful. This instinct affords him no guide at all as to what he should worship. To do this, is the province of reason and revelation. And while these infallibly point out the great Creator of all, as the only fit object of worship, in the highest sense of the term, yet there is a sense in which "gods many, and lords many," may and should be worshiped (or honored), with true devotion. But even here, reason and revelation must be his guide, or he will sink to the folly and crime of gross idolatry.

All worship, even in this subordinate sense, should be consistent. Consistent idolatry is far less odious than that which is inconsistent. We might pardon the astronomer for his worship of the stars; but we would be disgusted with his homage to a golden calf. Every man should be engaged in a good cause, and should admire, honor, or worship it accordingly.

Being now about to engage in the study of an important science, let us ask ourselves if the cause is not a good one. And if good, shall we not honor ourselves by honoring it? As the youth seeks the society of her whom he adores, so let us manifest our love for this science, by seeking an intsmate acquaintance with its truths.

But if you doubt the propriety of rendering homage to this science, and fear that in doing reverence to it, in all its ramifications, we may be regarded as "too superstitious," let us turn our attention to a single element which it reveals to us, and inquire to what extent, if at all, it is entitled to admiration.

Waht, then, is the character of oxygen? To what extent is it entitled to our consideration? How much respect do we owe it? What revenue must we pay it? Shall we worship it?

Man naturally admires and reverences that which is mysterious. And this element is invisible. It is *seen* only in its works, which are many and wonderful. It forms the ocean and the land. It presides over the atmosphere, and governs the changes which take place on the earth's surface. The other elements are its servants, and are forced to aid in its manifold labors. With one it forms the rain-drop and the dew, with another, the balmy atmosphere, with a third, the flinty rock, and with a fourth, the miry clay. With one it fans the genial fire, and with another extinguishes the destroying conflargation. These are but parts of its ways—ever busy, but still invisible.

Nor is this all of its mystery. Where is it? Nay, where is it not? Is it omnipresent? It extends high above the mountain crag, and far below the ocean's bottom. It accompanies, or rather carries, the eagle in his most daring flight, and follows the miner down deep into the bowels of the earth, and is there even before him. It rides on the swift wings of the wind, and rejoices in the storm-cloud; for both are creatures of its construction. It is in the middle of the mountain, in the solid rock, and in all things that live. Man can not define its boundaries. To him it is practically, omnipresent.

But think of its power. In the morning of creation it combined with the lightest and least tangible of all its comrades, and formed the fountains, rivers, seas, and oceans. In like manner, by other combinations, it made the solid earth. It seized a bright metal and turned it to lime. It laid hold on the diamond and changed it to a gas. Forcing these to unite, it formed the solid marble. It raised itself on the wings of the wind and became the vital principle of the atmosphere. And having formed the seas, the dry land, and the air, it presided over and took part in the formation of plants and animals to beautify and people the earth. And ever since it has been busy, and still it is powerful. It organizes the forces of its kindred elements, and works

wonders at which man stands aghast. We behold the majestic steamer, stemming the river's current or riding on the angry waves, defying the wrath of the mighty deep, mocking at wind and tide, and reaching in safety its destined port, and all through the agency of this grand and glorious element. The ocean having spread itself out as a barrier to the progress of man, this hero-element comes to the rescue. Taking his favorite partner, the delicate hydrogen, he goes into the very heart of the mighty engine, and together, they form its life-blood. He calls for his servant carbon, and fans him into a flame, imparting warmth, and life, and motion to the mighty machine of his own building; and the ocean is subdued, the winds are overcome, places far distant are brought nigh together, man becomes ubiquitous, and all are neighbors. With the same mighty machine he drags the lightning train across the land, over iron bars of his own forging, laughing at distance and mocking at time. His lightning train over his iron track! Nay, it is thus he travels at leisure. When prest for time, he calls down the lightnings of heaven, and sends them forth across land and sea, on the wiry track which he has prepared for their guidance. May we not well exclaim, O Oxygen, great and marvelous are thy works!

But our hero element is powerful to destroy, as well as build up. Few, if any, elements have hardened themselves against him, and have prospered. The strength of iron is as nothing with him, and weapons of steel he grinds to powder. Gold becomes as fine dust before him, and silver as the blackness of darkness. He calls for the aid of his servant, nitrogen, and the solid marble melts like snow. Helped by another servant, the flinty rock becomes grass and stubble before him. The leaves wither at his blighting touch, and nature is dissolved by his blasting energies. Let us think, for a moment, of the ruin he has wrought since creation's morn. The flowers, the trees, the birds, and the beasts, of ancient days, have all been swept away by the hand of this ruthless destroyer. He has swept over the earth, and nations have withered by the blast of his breath. Great Babylon is fallen—is fallen, and by his mighty hand. Where are the cities of the old world? He has burned them to ashes, or crumbled them to dust; and, over their ruins, he raises the shout of triumph, and rushes forward to new conquests. When the whole world had rebelled, he destroyed it by a flood—all its inhabitants save one righteous family, which he carried in his bosom, and wafted, by the genial gales of his balmy breath, to a place of safety. He has broken the ships of Tarshish with his east wind. He has overwhelmed fleets and navies in the mighty deep. Great is the ruin he has wrought, and still he is unsatiated. He forges the thunderbolts of war, and gives to them their destructive energy. He manufactures a cooling salt, which, in the hands of two of his servants,

becomes a demon of destruction, hurling forth "firebrands, arrows, and death," and imitating the thunders of heaven. Nothing material escapes his destroying hand. He devours the widow's bread, and wastes the fruits of the earth, to create the demon alcohol, that the world may be filled with crime, and men may be changed to devils. He is the merciless executor of that sentence, "Dust thou art and unto dust shalt thou return."

And then just think of the petty annoyances. While he blows the smith's fire, he consumes his coals, and wastes his iron. The surgeon rejoices in his shining blade, and the dentist delights in the lustre of his forceps, but he watches for their negligence and covers them with rust. He withers the leaves of the lady's arbor, and sours the milk in the dairymaid's pans. No annoyance is so petty that he will not stoop to it. He addles the eggs of the patient bird, and molds the food of the busy ant. He breathes into the pantry and the bread becomes stale, the butter rancid, the meal musty and the meat tainted. He rots the farmer's fruits, his farm houses and fences, and turns the housewife's jellies and jams to vinegar. In short, he is prying, petulant and impertinent.

Shall we reverence such an object as this? Shall we even respect it? Nay, shall we not ignore or despise the science that discovers it and reveals its attributes? But why should we not reverence it? Why not even worship it? While sages sacrifice to devils, and savages worship the storm-king, shall we fail to worship oxygen? What if it is the great destroyer of our race? Should we not try to propitiate that which will one day crumble us to dust?

But let us turn from this and think of his goodness. Why, he blesses us every hour—gives a new blessing with every breath. But how shall we specify his acts of kindness when we owe him our life, and are each moment dependent on him for its continuance. In the earliest moments of our helpless infancy, he breathed into our nostrils the breath of life, and has breathed new life ever since. He allays our hunger, and quenches our thirst, with food and drink adapted to our appetites and desires. He not only surrounds us with good things, but he is so jealous of our welfare that he rushes into and explores every avenue of our bodies lest there may be something there to harm us. He ransacks our entire systems—veins, arteries, capillaries, and cavities—and comes out loaded with poison twenty times a minute. He makes every pore of the skin an outlet for the purification of our bodies. He kindles a fire to warm us when we are cold, and fans us with the cooling breeze when we are hot. He builds us houses, like palaces, to dwell in, for our comfort and protection. It would seem as if he were determined that man should live always—not only live but that he should roll in all the imaginary luxuries of a fabled dream.

Not content that man should live—that he should breathe the balmy air of a life-giving atmosphere, that he should slake his thirst from the sparkling spring and eat of that which is good, and delight his soul in fatness—our favorite element overwhelms him with delights of which he could not even dream were they not constantly showered upon him as happifying realities. How he blesses our sight. He clothes the earth with its carpet of green, and covers the forests with the same gay colors.

"Gay green! thou smiling nature's universal robe—"

And our hero is the dyer that colors that robe. He paints the flowers with their varied hues, he screens the sunset with its crimson veil, and curtains the heavens with the fleecy cloud. And think of his beauty as he glistens in the dew-drops and sparkles in the rain, or when he spreads the canvas of the storm-cloud, and illuminates his face with the day-god's pencilings in the hues of the bow of promise. He moistens the eye of the maiden till it glistens with love. He fans her cheek till it rivals the rose, and bleaches her brow to the lily's hue. And even when he appears to frown—when the face of nature is wrapt in decay, he makes her beautiful, even in death. When the forest leaves fade—as fade they must, for they are mortal—he beautifies their death-robes with his varied tints, till the eye is entranced with the gorgeous colors, and even the south wind accepts them as a substitute, and no longer

"Searches for the flowers
Whose fragrance late he bore,
And sighs to find them in the wood
And by the stream no more."

But not only does he delight the eye, but he charms us with the melody of nature. He teaches the bee to hum, the bird to warble, and the child to laugh. He gives voice to the singer and tones to the lute and organ. In short, he blesses us through all our senses.

Nor is he at all capricious in the bestowal of his favors. In spring-time he moistens the earth with showers, fans it with gentle breezes and bedecks it with flowers. He makes the grass for the cattle and the tender herb for the service of man. In summer he comes riding on the south wind, and warms and fertilizes the earth. He loads the trees with fruit and causes the grain to grow for the sustenance of man and beast. In autumn he blesses us with the fruits of the earth, and satisfies us with the increase of the ground. The harvest of the earth is ripened by his breath, and the husbandman rejoices in the abundance of his blessings. In winter he converts even the fierce north wind into a blessing. He scatters hoar frost like ashes, or spreads it in silvery

beauty over the window of the sleeper. He covers the earth with snow, and makes us rejoice in the tinkle of the sleigh bell. At all times and seasons he is the same kind benefactor.

He disburses his favors not only with a liberal hand, but without partiality. His goodness reaches to all men. Every department of life is blest by his presence and aided by his energies. He rewards the labors of the farmer with abundant crops. He brings merchandise from afar, over sea and land, to enrich the trader. He blows the fire for the smith and turns the mill-wheel and the spindle. He refines the ores of the metallurgist, and melts the founder's metals. To the physician and the dentist he is indispensable. He prepares the medicines of the one and purifies the metals used by the other. No department of life is beneath his notice. He toils in the kitchen as a faithful servant, preparing and baking the bread, roasting the meat, browning the coffee and drawing the tea. He covers our tables with luxuries, and respects the appetites of the most whimsical. He fills the sails of the mariner and wafts him to his destined port. He floats the schoolboy's tiny boat and carries aloft his paper kite. He furnishes the painter his colors, and the sculptor his clay and marble. He carries the bird in its rapid flight, and goes deep down into the dark ocean to bless the great whale and the little fish. He stops at nothing in his errands of mercy. Floods cannot drown him, and fire is but a plaything of his own creation. Height and depth are alike to him, and distance is only his delight. If not revered for his wonderful works, should he not be praised for his goodness?

Here, then, is presented to our consideration an agent, invisible, diffused, mysterious, powerful for good and powerful for evil, that goes about doing good, and at the same time seeking what he may destroy, that kills and makes alive, that wounds and heals, whose existence antedates the life of man, which is indestructible as well as unchangeable. However we may estimate it, one thing is certain, that if it had been revealed by our science in ancient days, the great Jupiter would have been deposed to at least secondary rank. Had it been known at Athens, the Apostle would not have found an altar "to the unknown God," but to the god, Oxygen. And when we reflect on the characters of the gods they worshiped, we are led to pity their ignorance of this wonderful agent, which seems so much more worthy the homage of their philosophers. But while we pity, let us inquire if our worship of this would be found more exalted and purifying than their worship of beasts and reptiles, or wood and stone.

What, then, is Oxygen? Certainly it is a wonderful thing; for a wonderful God created it. And because it is a creature, and not a

creator, it stands on a level with its kindred elements—on a level with birds, and beasts and reptiles, and is no more wonderful than they. In the light of our science, everything that God has made is wonderful, and to us incomprehensible. Everything is worthy of our admiration; and it is highly proper that the science we are about to study, which has a more extensive range and reveals more of the mysteries of the material universe than any other you are called upon to investigate, should teach us to "look through nature up to nature's God," to see the Creator in all his works, to look upon all the elements as but so many passive instruments in his hand. Till we are able to do this we have failed to learn the great lesson taught by our science.

But, gentlemen, do you expect to master the science of chemistry in the few short months we are to spend together? As well might the traveler expect to traverse the entire globe in a single day and return at nightfall to sleep in his cottage. No man on earth will ever get through with the study of this science. But shall we despair on this account? May it not be

"That one of the joys of our heaven shall be"

a fuller and clearer knowledge of the chemical properties of God's universe than it is possible for us to have here? But you may expect to obtain, by attention and study, such knowledge of it as will make all future study of it a pleasure and a source of satisfaction.

Are you discouraged and ready to turn back on finding that you make so little progress in this science? You have the same cause for discouragement elsewhere; for you have not, and never will have, a perfect knowledge of any science; nor would you be happy if you had. Here we know only in part; but there—we shall know even as we are known.

A Large Tooth.—About a month ago, a lady from our town introduced herself to me, with the intention of having some teeth extracted to make room for an artificial set. I removed eight of them with great difficulty, tho I had administered first a soothing preparation invented by me for this purpose. A few days ago, the lady returned to have the remaining teeth removed. In examining the mouth, I found a perfectly sound upper cuspid on the right side, and I advised her to let it remain. The lady, however, insisted on having it removed; in doing which, I succeeded after two unsuccessful attempts with safety-forceps. The tooth is one and one-eighth inches long, and shows a circumference of one inch. The lady weighs at the present time one hundred and ten pounds. Has any one extracted a larger tooth? We should like to compare notes.

West Liberty, Ohio. DR. C. A. THATCHER.

THE DENTISTS OF FIFTY YEARS AGO.

I am disposed to criticise the talk of W. C. Barrett in the Kansas Dental Society, reported in *Western Dental Journal*, copied in ITEMS for September, on page 413.

He starts off by disparaging the dentists of a single generation back, "professionally, socially and morally" (was he one of those whom he thus belittles)? My observation of the dentists of fifty years ago, down to a generation ago, was that they averaged as high in those respects as the dentists of to-day. He says they were not educated. If he means they were not educated in dentistry, we answer, they knew all there was of dentistry at that time.

If he means they were not educated in a general sense, they would average quite as high as the dentists of to-day.

He says they were men who did not think. In saying that, he talks without thinking, or he talks about things of which he knows nothing.

They were the men who inaugurated the system of dental colleges. They organized dental conventions and societies. They didn't think, did they? I venture to say the era of dental charlatanism predominated from the time of the introduction of vulcanite plates to the enactment of laws regulating the practice of dentistry, when any thick-head thought he could throw together a rubber plate as well as those who were skilled in metal work.

In his closing paragraph, Dr. Barrett gives the dentists of to-day a high *eulogy*. But in his talk, as given on the 420th page of ITEMS, he seems to concede everything isn't so very lovely to-day after all. His idea, as gathered from the two reports, seems to be, in those old days, we did not know how to think, or had not the capability, while to-day we cannot stop to think.

Finally, I suggest that the foundations are already laid. Let us take heed how we build on those foundations, and not undertake to belittle the foundation layers, some of whom have gone before, and others still remain.

Almont, Mich. R. S. BANCROFT.

The Growth of the Jaw.—1. The jaw continues to grow from infancy to adult age.

2. Its elongation is mostly from the second temporary molar backward.

3. Its elongation depends largely on the growth of the permanent teeth.

4. The growth of the alveolus is also dependent on that of the permanent teeth.

DEATH OF MRS. WALKER'S DAUGHTER.

In October ITEMS we recorded the accidental shooting of Miss Flora, daughter of the author of "*A Mother to Mothers on the Teeth*," and our frequent correspondent, under the *nom de plume* of "Mrs. M. W. J." We now lay before our readers a note from the mother announcing her daughter's death:

BAY ST. LOUIS, MISS., September 30, 1889.

DEAR FRIEND:—My daughter is *at rest*. After seventeen days of *untold agony* from the formation of intercranial abscess, she passed away very suddenly, from hemorrhage on the brain, at 3.45 o'clock, Thursday, September 26. It lacked but two weeks to her twentieth birthday, for which all her friends were preparing pleasant surprises.

In my heart I can say *thank God* she is taken from a future which held out no hope. The *post mortem* proved that she would never have recovered from the paralysis, and must gradually have lost her mind, while from her grand physique she would probably have reached to old age.

Even in health I had always prayed that she might go before me, knowing her as only a mother could. Her brain was unusually large (38 oz.), in a very small, thin skull. She had always suffered much from headache, and often said: "Mamma, I believe my brain is too big for my skull, it feels so tightened and bound down."

How little we knew how truly she spoke.

J. M. WALKER.

In a local paper we read:

MISS FLORA WALKER.

Mrs. J. M. Walker, widow of the late Dr. J. R. Walker, of this city, has met with another sad loss in the death of her second daughter, Flora Camille, which occurred very suddenly at Bay St. Louis, Miss., on Thursday, September 26, 1889. Wounded in the head by the accidental discharge of a pistol on the 14th of June last, she had, since that date, been paralyzed in the left side, but free from pain until within the last three weeks, which have been a prolonged agony from cerebral abscess, terminating suddenly in hemorrhage on the brain. The sympathy of many friends will be extended to Mrs. Walker in this time of her great bereavement.

Modeling Composition may be advantageously used to take an impression, if it is cooled immediately after being pressed against the jaw. A spray of cold water from a syringe is a good cooler; when this is used, the lap should be covered with a rubber apron in which is a large dampened sponge to absorb the overflow.

C. H. COLLINS, St. Paul, Neb.

SOME INTERESTING POINTS.

We received, without post-mark or address, an article from which we take the following, well worthy of attention:

We should do all in our power to make things pleasant for our patients. Keep an attractive reception-room, everything having a cheerful, neat and tidy look. I would not allow anything in my reception-room that would remind the patient of being in a dental room.

Be as gentle with your patient as you would be if you were handling a child. A gentle and sympathetic manner goes far toward enabling the patient to endure a painful operation.

At all times meet your patients with a cheery greeting. However much you may have been annoyed in the operating-room, when you step into the reception-room appear as cheerful and happy as if nothing unusual had happened.

By attention to these things, which many regard as minor details, you will rise one hundred per cent in the estimation of your patrons, and you will see the good results in an increased practice and a replenished purse. Many men succeed in building up a large practice who have very little ability except in making themselves and their surroundings attractive to the people, while men of superior education, by neglecting this part of their professional duty, are barely able to make a living.

Dentists ought to talk familiarly with their patients, instructing them in the general principles of dental science. The more intelligent they become on this subject the more they will realize the occasional need of the skilful dentist, and thus both healer and healed will reap the benefit of the additional knowledge. Only quacks try to prey on the ignorance of the multitude.

Free public lectures should be given under the auspices of the State Association, and by men specially fitted for the work.

Articles on the subject adapted to the general reader should have circulation in the daily and weekly papers. With such efforts as these, systematically put forth, much could and would be done to educate the public as to the value of their dental organs and the importance of giving them proper attention. With the growth of an intelligent public sentiment, knavery and quackery would soon die.

Dr. H. Fisher, St. Louis, Mo., believes that peroxide of hydrogen has a stimulating and healing influence on inflamed tissue, in addition to its cleansing, pus destroying properties. He thinks its therapeutic value in necrosed conditions is greatly increased by the free sulphuric acid it contains.—*Dental Register.*

DENTISTRY IN ONTARIO, CANADA.

"STUDENT."

To Editor of ITEMS OF INTEREST:—The Royal College of Dental Surgeons has as good a corps of clinical instructors, who give as good a course of instruction as many of the leading colleges in the United States. And yet every year a great many of our students take their final course in the States. Now why is this? I think the principal reason is because the dental fees are not so good here as in the States, therefore they would sooner practice there.

But why are they not as good? Because we have too many cheap-jacks. We allow men to hang out a sign, and call themselves dentists, who have no more right to do so than a blacksmith has. We do not protect ourselves, but we allow these men to do a great deal of advertising, etc., and do work for half the proper fee.

Occasionally our Dental Association passes resolutions and declares it unprofessional to advertise. What do these men care if it is unprofessional? They laugh in their sleeves when these resolutions are passed, for they materially help them. An honorable, conscientious dentist has to sit in his office and wait, while these cheap-jacks are busy. They send cards all over the country, telling the people to come to them and get good work done at half price. We should clean out these so-called "dentists," root and branch. Some of them, we are ashamed to say, are protected by a license, but there are a great many who have no license, graduating as office-boys or are runaway students, who have only seen a few amalgam fillings put in and two or three plates made, and so think they know all about dentistry. We have a law to protect us against such men. But what good is it, if it is not enforced? I think if the dentists of Ontario were to follow the example set by some of the physicians in the States, and make out a list of fees, and stand by them, we would be able to keep our students in our own college.

Another case of deformed artificial teeth came to my notice a few days ago. A lady called on me who had just received from her dentist an upper set of teeth the arch of which was so broad as to destroy the contour of her face entirely. As she had paid for the teeth in advance, having confidence in the honesty and ability of this dentist, and as he refused to make her a new set, contending that those he had already made for her were "artistic," she was obliged to take them, tho they were entirely useless to her. An examination of her mouth showed a perfect arch and that the front section of the artificial teeth were nearly flat, which, of necessity, spread the arch enough to produce the result complained of.

WHEN MARRIAGE IS A FAILURE.

According to a bachelor editor, the following is why so many marriages prove a failure: He says that nine tenths of the unhappy marriages are the result of green human calves being allowed to run at large in the society pastures without any yokes on them. They marry and have children before they do mustaches; they are fathers of twins before they have two pairs of pants, and the little girls they marry are as old as their grandmothers in schemings. Occasionally one of these gosling marriages turns out all right, but it is a clear case of luck. If there was a law against young galoots sparking or worrying before they have cut all their teeth, we suppose the little cusses would evade it in some way, but there ought to be a sentiment against it. It is time enough for these bantums to think of finding a pullet when they have raised money enough to buy a bundle of laths to build a hen-house. But they see a girl who looks cunning, and they think there is not going to be girls enough to go around, and they begin to get their work in real spry; and before they are aware of the sanctity of the marriage relation they are hitched for life, and before they own a cook-stove or a bedstead, they have to get up in the night and go after a doctor, so frightened that they run themselves out of breath and abuse the doctor because he does not run too, and when the doctor gets there, there is not enough linen in the house to wrap up a doll baby. It is a shame and a disgrace.—*Cincinnati Medical Journal.*

Death from Swallowing Artificial Teeth.—READING, Pa., Sept. 13.—The death of Mrs. Frances Dunsford, the wife of George H. Dunsford, foreman of the Reading Paper Mill, and a well-known citizen, occurred to-day under peculiar and distressing circumstances. On last Tuesday evening she attended the performance of Denman Thompson's "Old Homestead," and, while laughing heartily at the innocent merriment, she suddenly threw back her head and was seized with spasms. Her husband carried her out, and she was conveyed home in a cab. At first she seemed to be improving, then her nervous system became greatly prostrated and the attending physicians gave it as their opinion that something foreign had lodged in her throat. Then it was discovered that her artificial teeth were missing, and it was believed that she had swallowed them. She became hysterical and finally sank into unconsciousness, in which condition she died this morning. The physicians held a post-mortem this evening and found the teeth lodged near the entrance to the stomach. Mr. and Mrs. Dunsford are both of English birth, and moved to Reading from Newark, N. J.—*Ledger.*

MORE NEW DISCOVERIES.

A few years ago a wise V. S. discovered the astonishing fact that the milk in a cow's udder was secreted mainly after the milk-maid began to pump.

Now a learned D. D. S. tells us that the suction that holds a plate to the roof of the mouth is from saliva adhesion, and not from what the old fogies believe—atmospheric pressure. The coming discovery will no doubt be that dry suction is accomplished by a miniature vortex within the cup, instead of pressure from without. Next.

Chillicothe, Mo. J. W. GREENE.

Copper Amalgam.—The committee of the last Illinois Dental Society is of the opinion that the antiseptic property of copper amalgam has been over-estimated, and that the use of copper amalgam is not as general as it was a year or two ago. A supposed special advantage of copper amalgam—that of being worked under moisture—is possessed by all the amalgams, and the only advantage the copper amalgam possesses in this respect is, that the latter may be worked in a more plastic condition. To make a perfect filling with it when worked under water, it requires, like other amalgams, the presence of more mercury and packing so thorough as to drive out all moisture from the cavity. Gold, too, can be worked under water, if sufficient pressure be used to condense the gold and to drive out the moisture perfectly.

How Drunkards are Treated in Norway.—The London correspondent of the *Am. Prac. and News* says that a well-known medical man, who has recently been in Norway, gives a glowing description of their manner of treating dipsomaniacs. An habitual drunkard in Sweden and Norway is treated as a criminal in this sense, that his inordinate love of strong drink renders him liable to imprisonment; and while in confinement it appears he is cured of his bad propensities on a plan that, tho simple enough, is said to produce marvelous effects. From the day the confirmed drunkard is incarcerated no other food is served to him or her but bread and wine. The bread, however, it should be said, cannot be eaten apart from the wine, but is steeped in a bowl of it and left to soak thus an hour or more before the meal is served to the delinquent. The first day the habitual toper takes his food in this shape without the slightest repugnance; the second day he finds it less agreeable to his palate, and very quickly he evinces a positive aversion to it. Generally, the doctor states, eight or ten days of this regimen is more than sufficient to make a man loathe the sight of wine, and even refuse the prison dish set before him. This manner of curing drunkard habits is said to succeed almost without exception, and men or women who have undergone the treatment not only rarely return to their evil ways, but from sheer disgust they frequently become total abstainers afterward.—*Med. World.*

Exercise and Medicine.—Boerhave, the famous physician, says a man is more likely to get well by climbing a tree than by drinking a decoction made of its leaves; that is, exercise is better than medicine. It is on this principle that the Queen of Sweden, whose nervous condition has given rise to much anxiety, is being treated. She is ordered to make her bed and sweep her room, besides taking a large amount of walking exercise. This method—the "housemaid treatment," as he calls it—has inspired a cynical journalist with some suggestions which are, perhaps, wiser than he knows. He advises the "office-boy treatment" for the dyspeptic millionaire; the "groom treatment" for the Crœsus whose liver is too much with him; the "country postman treatment" for the obese financier; the "nursemaid treatment" for the hysterical woman who cannot stand a child's cry; and the "old clothes woman treatment" for the fine lady who faints at the least disagreeable sight or smell. Probably the "treatments" would be efficacious—if the patient would submit.—*London Hospital.*

The Shah and His Dentist.—After mature deliberation, and on the advice of his physicians and ministers, His Majesty has at length decided on having a troublesome tooth removed. The operation has all the importance of an affair of State, and is performed by the court dentist, a European who occupies a very prominent position—he holds the rank of colonel and the title of Khan. His Majesty awaits the momentous event sitting in an easy-chair, surrounded by the dignities of the realm and his European medical adviser. The dentist stands at a respectful distance with his instruments till the Shah, in his peculiar gruff voice, exclaims: "H—— bya insha" (H—— step forward), when he advances toward his patient. The King closes his eyes, and the Prime Minister takes this opportunity to approach in a stooping position and lay a purse full of gold tomans at his ruler's feet, as a solatium for the pain he is about to undergo. The other functionaries follow his example. Now the forceps is applied, and crack!! the tooth is out. A simultaneous shout of "Bravo!" is set up, the King and his dentist are congratulated, and the latter receives at once from the hands of the Shah one of the purses that strew the ground, and a silk shawl of great value. The King then examines the offending tooth, which he bestows as a present on one of his favorites, and then gazes with rapture on the substantial tokens of sympathy that have been laid at his feet.—*Frankfurter Zeitung.*

To Cleanse Nerve Broaches, or free them from cotton, take a *steel wire wheel brush* (such as are used for cleansing burs), on the engine, and pass the broach through it. O. H. UHLER.

For Our Patients.

DENTAL CARIES.

From a pamphlet published by the Illinois Dental Society.

This subject has received much study for a long time, and tho' much has been learned, and, its causes and phenomena are now ascertained, yet it is still easy for patients to ask questions about it which dentists cannot answer satisfactorily.

Dental caries is caused by the decomposition or solution of the hard parts of the teeth by acids, and always begins on the external surface, or in a pit or crevice having an external opening. The acids are for the most part, produced at the very spot where the carious cavity is being formed, by the firmentation of particles of food that become lodged there. Putrefaction takes place also in the same localities, and some have supposed that several of the mineral acids may be formed by direct chemical action, from the ammonia and other products of putrefactive decomposition.

The temperature of the mouth is always about 98½° Fahr., and ferment gems are almost invariably present there, so that the quickness and certainty with which acids will be formed from any particles of starch or sugar that remain lodged about the teeth are well illustrated by the time it will take for new milk to sour on a summer day, when the heat is 98° or 100°, if the milk is placed in a dish containing a few drops of sour milk to start its fermentation. Could anything be said that would more forcibly illustrate the necessity of cleanliness of teeth, to preserve them from destruction? Notwithstanding this, teeth are occasionally seen which do not decay, tho' uncleanly. Why they do not is one of the questions hard to answer.

The absorbtion or destruction of the gums and bone, resulting in the loosening and premature loss of the teeth is usually caused by the inflammation produced by the presence of tartar on the teeth; but there is also a disease which may sometimes produce the same result independently of calcareous deposits. The latter usually accompany, if they do not precede the disease.

Calcareous deposits are from the saliva, and are soft and pulpy at first, easily removed by the brush and a proper dentifrice. If allowed to remain, they soon become infiltrated with lime, and acquire a stone-like hardness, adhering to the teeth tenaciously, often requiring considerable force for their removal.

There is another form of calcareous deposits, derived from the serum of the blood, and formed far under the margin of the gums, or in the deep pockets when the gums and root membranes have been

for some time inflamed. Sometimes, also, on the end of a root surrounded by an abcess. Any of these deposits are a cause of inflammation. Habitual and thorough cleansing of all of the exposed parts of the teeth is the most important of the measures available to prevent or retard the destructive processes just referred to.

When carious cavities have once begun to form, or when calcareous deposits have become attached to the teeth and hardened, home treatment will not avail, either to stop the progress of the decay or to remove the deposits. The services of a dentist are required, and should be sought without delay. The diseases caused by calcareous deposits often require a long time and much patience and thoroughness for their cure.

If the daily care of the teeth does not keep them entirely free from calcareous deposits, they should be frequently removed by the dentist, from once to four times a year, and always as soon as they are observed to cause any inflammation of the gums.

TREATMENT OF THE TEMPORARY TEETH.

It must be remembered that these teeth are designed to serve the child till his eighth, ninth, or even twelfth year, and that during this growing period in life, his comfort and health depend largely on his ability to masticate his food properly, and on undisturbed and refreshing sleep. For this reason, if there were no other, we would unhesitatingly say, the proper labor bestowed on these teeth, when decayed, is often of the utmost importance to the welfare of the little patient.

The premature loss of either of the temporary molars, especially the second one, allows the first permanent molar (which is erupted about the sixth year) to move forward, so as to encroach on the space which will soon be needed for the permanent teeth. This is a very common and deplorable cause of the irregularities of the teeth.

IRREGULARITIES OF THE TEETH.*

When teeth are out of their natural positions, they not only disfigure the features, but are more liable to decay than when arranged according to nature's laws. Tho' it frequently happens that the permanent teeth are at first crowded and uneven, yet in a few years they generally become regular, without the aid of a dentist. The main cause of these irregularities arises from the fact that the crowns of the teeth have, at their first appearance, already attained their full size, while the bones of the jaw in which they are set have not. The latter continue to grow for some years afterward, thus gradually expanding the arch, and giving more room, which the teeth will occupy, generally, in a regular manner, with little assistance.

* Deciduous teeth are seldom irregular, and require no treatment.

Sometimes, however, skilful aid is required to bring them to their proper positions. It is impossible to give any comprehensive rules, whereby one can determine the cases in which irregular sets of teeth should be disturbed. Your dentist should be consulted in such cases, for experience is the only safe guide.

The most suitable time to regulate the teeth is, generally, when the child is from twelve to fourteen years of age, yet they often require earlier attention. They may sometimes be successfully regulated several years later, but the operation is more difficult, painful, and expensive. Never allow any of the six front teeth in the upper jaw (*i.e.*, the four incisors and the two eye-teeth), however crowded or misplaced, to be extracted for the purpose of regulating the set. Such an act will produce a life-long deformity of the features.

Sometimes the bicuspids, or molars, may be extracted to make room in the arch, and any of the deciduous teeth or roots that are the cause of the irregularities, should, of course, be removed. But as a general thing the permanent teeth may, and should, be brought into their natural positions without the loss of even one of them.

Subscriptions for Next Year.—By receiving the names of subscriptions before the end of this year, we are able to make out our mailing list for the coming year much more satisfactorily. Those now taking the ITEMS, therefore, will confer a special favor by sending in their renewals early.

New Subscribers sending in their money *now*, will receive the November and December numbers free.

"I tot I'd kall to see you," said a matronly looking colored woman to a New York dentist, "to hav diss yar toof distracted—pointing in the direction of her inferior molar, "kaze, it am done gone ake de whole blessid time."

After being seated in the dental chair, she continued:

"What am you gwine to ask aunty to took out dat toof?"

"Fifty cents."

"It hurt, I 'spect, orefully, won't it honey?"

"But a moment."

"Kant you jiss put a little laffen gas on so dat aunty won't feel de hurt so much?"

"Oh, yes," said the dentist, good-naturedly, while reaching for some harmless liquid. "Now, aunty, point out the particular tooth you desire extracted, for you have three adjoining teeth equally decayed."

"I 'spect it am dat one, honey," she said, laying her finger over the three molars, "fur de ake kum frum 'round dare, sartin."

"All right, aunty," exclaimed the dentist, while making a liberal application of a liquid to her gums.

"If I holler, honey, don't be skeered, for I 'spect I will."

"Oh, no, aunty, I am quite accustomed to that kind of music."

"You dont' think you am got de rong toof, honey?"

"Think not, aunty."

"I 'spect it am gwine to almo' kill de ole woman, aint dat so, sah?"

"The hurt will not be more than a mere flee-bite, aunty, so don't be alarmed."

"Spozen dat it am de rong toof dat ake when its out, how 'bout dat, honey?"

"Nonsense—not possible, aunty."

"Jiss hold on a min't, honey," she said, as the dentist was about to apply the forceps to her tooth.

"The quicker you have it out now, the better will be the effect of the laughing-gas, said the dentist, with a dawning anxiety on his countenance.

"I aint laffed a bit sin' you put de gas on the toof, and I 'spect it hasn't took hold, honey?"

"The gas is all right, but I fear you are all wrong, that's the trouble, if there is any," said the dentist.

"Am dat de eye toof, honey?" she asked, "kaze day say dat wen you pull the eye toof it fotch de eye, too, mos' allway."

"That's a very foolish question," the dentist replied, sharply. "If you wish me to extract your tooth say so, and have done with it."

"I guess I hold on dis time, honey," she said. "Aunty had awful dream lass nite, and I 'spect it am 'bout dis bery ting. Yes, sah, aunty back kleen out, 'shuah,'" saying which she left the chair.—*The Practical Dentist.*

A countryman accompanied his daughter, a coarse looking red-headed girl, to the office of a New York dentist, and addressing the doctor, he said:

"Be you the tooth doctor? Kaze this ere gal wants to git a tooth pulled out. We're got a sort of tooth tinker in our town but he aint got sentz enuff to kum in wen it ranes; so I told Peggy that the fust time I kum to York she could kum 'long and have the thing dun up in city stile."

When Peggy was seated in the dental chair, the doctor asked her if she had constant pain in her tooth, and in a whining voice she replied:

"Constant did'nt hav nuth'n to do with it, so thar now."

"That's the name of the feller wots comes to see the gal!" exclaimed the father with a chuckle.

Editorial.

DEFINITE THOUGHT.

We all have thoughts enough to make us wise and useful, and to bring us to honor, and power and independence; but we let our thoughts flit through our minds without sifting them, and retaining the best; and the good thoughts we do lay hold on are not used to the best advantage. We allow them to lie about loose, till finally they are lost, instead of maturing them carefully and bringing them into use, or laying them aside definitely to be brought to the front when needed.

We are apt to use our golden thoughts as many of us use money. There are few poor who might not be rich in both. But most of us squander our intellectual and our material riches, and then blame every one but ourselves for our poverty. We are every one of us rich in opportunities—riches in thoughts and purse are fairly thrust on us, and they go rattling to our feet, unappreciated. We toy with them flippantly, kick them about thoughtlessly, and abuse them till they disappear.

There must be economy, thoughtfulness and definiteness in our habits, to become financially or intellectually rich.

There is not so much difference between men as between their habits and their modes of thought and plans of action which are at the foundation of their habits. It is said, "We cannot make a whistle out of a pig's tail," but we can make of ourselves almost anything we choose by qualifying ourselves for it. The pig's tail is a very unpromising thing to make a whistle of; but it has been done, and can be done again. So the most unpromising boy or girl, yes, and the most unpromising man or woman, can be made to whistle some kind of tune, for which some part of the world will pay them a recompense, *if they put themselves about it with fixt thoughtfulness and an indomitable perseverance.*"

Tho nature may have neglected us, so that, as we and the world count smartness, we are of little account, yet with the fire of a laudable ambition, the penetration of some definite purpose, and perseverance in some definite pursuit, we are almost sure of success.

We all see these little toy chairs, bedsteads and other furniture now found in every toy shop. They are ingenious little things, amusing our children much, and withal they are very cheap. Who would think they came from the brain of an idle, drunken vagabond, who was kicked out of the back door by his incensed wife? But so it is. As long as she tolerated him in his idleness and dissipation he laid about loose, selfish, thoughtless and useless. Now she had landed him on

the ash barrel, and there he sat whittling. Well, whittling sometimes means thinking. As his whittling took shape, he thought definitely for the first time; and tho he could only say, "There's a play-thing," it was something; and he tried again. From a spoon he thought of a dish to put it in, and then of a cup and saucer and sugar-bowl. Now a table was conceived, on which to put his dishes. After this took shape the fairy that comes to sit at the table must have a chair and other furniture, till finally he had quite an outfit for a fairy family.

He went without his dinner; of course he did, for his wife, for the first time, was inexorable. She would take care of herself, and he might take care of himself, or starve, and she didn't care much which. He went to town; but not to visit the grog shop, as usual, but with his definite idea and what had come of it, to the toy shop—to be laughed at. But a burning, consuming, all-controlling thought had possession of him, and that could not be daunted. He begged the toy vendor to give him something for them, and he would do better next time. He got a pittance for them, and tried again, and again and again, each time improving on his preceding effort, till he really got a demand for his toys. Then it bethought him that there must be some device by which to make them better, cheaper and more rapidly. (Oh, by the by, his wife took him back when he proved to be of some use, just as all good wives will do when we prove worthy, and just as the community will reinstate us, if we fall, when we come to our senses; but tho they kick us out of the back door, if we will sit on the ash barrel till we get some definite, useful, burning thought, and follow it, we shall be honored.)

Well, where is that man to-day? Occupying a large factory, turning out these toys by the millions, at a profit of thousands of dollars a year. And he has the satisfaction of amusing and developing children all over our country.

Every one of us have good ideas—enough coming and going through our minds to make us a success, if they were made a definite use of.

When Peter Cooper was a boy, he felt the need of an evening school, but could find none. Said he: "When I become a man I'll have one for those who will be poor boys then." This became the fixt, definite thought of all after years, till there was reared the magnificent building in New York called Cooper's Institute—the free school for all who choose to take lessons there. For thirty years he was studying and working and planning to make his purpose a reality. The purchase of the site was an herculean undertaking, but the labor of years made it his. And then came the massive building covering the whole plot, so that the rent of the stores and offices should go far

to pay the teachers and other expenses. And still this definite thought of his life did not leave him; for after all was complete, and the various departments of sciences and arts, and especially of the rudiments of education were in running order, he set himself about laying aside a munificent fund, the interest of which should supply any lack in its running expenses.

His work should be an inspiration to every poor man in the land. First have a purpose—a purpose that shall burn into your very life and take possession of every energy and every hour, and then with this definite thought always in view, *work to it.*

SOME ITEMS OF INTEREST ABOUT ELECTRICITY.

It takes only a thirty-cell battery to send a message over an Atlantic cable. There are now 100,000 miles of sub-marine cable in operation, enough to girdle the world four times. It costs $1000 a mile. The distance of a break from any given point is found by measuring the electricity needed to charge the remaining unbroken part, for the wire must be surcharged with electricity as it passes along.

There are 175,000 miles of telephone wire in the United States alone, over which 1,100,000 messages are daily sent. The longest distance over which conversation by telephone is daily maintained is 750 miles, from Portland, Me., to Buffalo, N. Y. There are now more than 300,000 telephones in the United States.

Electric railways are being constructed with great rapidity. There are now 400 miles in use, with many more under construction. The fastest time made is a mile a minute, on an experimental car. The street cars maintain 20 miles an hour.

There is now over a million miles of telegraph wire in the United States; enough to encircle the earth forty times. By the quadruplex system, four messages can be sent over the wire simultaneously. The longest distance between points of telegraphing is between British Columbia to New Zealand, via America and Europe. It takes about fifteen minutes to send a message from San Francisco to Hong Kong, China. It goes first to New York, thence through Penzance, Aden, Bombay, Madras, Penang, and Singapore. The fastest time made by an operator, in sending messages by the Morse system, is about forty-two words a minute.

Our war ship Chicago has the most complete electric plant for a vessel.

Pregnancy should not generally be a reason for the delay of needed dental operations. Kindness, care, and proper consideration on the part of the dentist; and confidence, quiet, and self-reliance on the part of the patient, will be securities against disturbance.

IMPROVING THE SPEECH BY AN ARTIFICIAL PALATE.

Improving the speech of those with cleft palate, by an artificial contrivance, is necessarily gradual, and needs the patience and perseverance of the wearer. The idea some have, that if the workmanship is perfect, clear speech is immediate, is disappointing and preposterous. The first effect may be to produce a still greater difficulty of utterance. It has been the patient's labor for years, to speak plainly with a defective palate, and he has partially succeeded. To abandon all these delicate adjustments of the organs of speech to existing defects, and to learn to adapt them to the new condition of things, is necessarily the work of time and strenuous effort. One of the radical changes he will have to overcome, is the expenditure of much breath in vocalising. Before, this was unavoidable, now, his artificial palate makes this impossible, or, at least, by no means desirable. Then, again, heretofore much of the air passed through the nose, now it must be directed through the mouth, which requires much skilled effort. Before, it was thought necessary to open the mouth wide in speaking, so that little use was made of the teeth and lips in articulation, now, the mouth must be comparatively closed, and the teeth and lips used to modulate and modify the voice. Speaking with an artificial palate, is like learning to speak anew, and we all know how difficult it is "to teach old dogs new tricks." Yet perseverance will accomplish surprising results, if the appliance has been skilfully made and applied.

THE POSITION OF THE ITEMS OF INTEREST

Is not antagonistic with other journals. It has its special sphere, which is, to bring to average dentists the greatest amount of practical information possible, whether original or selected, and of raising their standard morally, socially, and professionally. Journals presenting more scientific and exhaustive articles are also doing a good work, and it is difficult to see how a progressive dentist can do without one. Not to disparage any of our dental periodicals—for, American dentists should be proud of all of them—we are pleased to make special mention of the high standing and progressive character of the *International Dental Journal*, edited by Dr. W. X. Sudduth, of Philadelphia. This magazine was admirably conducted while under the supervision of Dr. Barrett; but it has lost none of its vim and thoroughness and dignity, under the management of its present editor. Every number shows, he is putting into it his very life.

Accuracy first, then speed; intelligence first of what should be done, then skill in the doing; this should be the order, and if followed will bring success.

DR. JAMES TRUMAN, AND LADY DENTISTS.

Dr. Truman was one of the first to begin the contest for the admission of women to the dentistry. Dr. Truman had long felt the importance of endeavoring to open up new avenues for the labor of women; and in his view, dentistry was one peculiarly fitted for her to engage in. Regarding it in this light, he felt it his duty to urge her claims on the profession, and began this educational work by briefly giving his sentiments in the valedictory delivered before a crowded audience March 1, 1866. This utterance was regarded as a bold innovation on established usages and brought down on his devoted head the severe condemnation of his colleagues. As a matter of history the following extracts from the valedictory are subjoined:

"When the professions cease to be objects of interest to the human intellect, that intellect may be said to be in its decadence, if it has not already lapsed into barbarism. The professions lead the civilizations of the world, as they advance the nations advance to higher intellectual attainments. I, therefore, welcome, all (who feel they have something to do therein) to the profession to which I belong, and gladly would I welcome still more than the world generally concedes have a right to be there.

"The recognition of the right of every human being to an equal share in the privilege we enjoy, has not yet become a principle of faith and practice as I think it should. We say to one-half of the human family stitch, stitch, darn stockings, make shoes for a shilling, stand behind counters for two or three dollars a week, do anything, but don't enter the sacred precinct that we have marked out for our peculiar benefit. Every human soul has certain qualities, these should mark its pathway through life. Talent is of no sex, color or clime; but is an inheritance from the Creator, given to be fully cultivated in the direction it leads. Hence, in my judgment, any attempt to cripple the aspiration of a God implanted intelligence is unworthy the age in which we live and is but little short of blasphemy against the Creator himself. As we keep any number of the human race in a condition lower than ourselves, just in that proportion will the degradation be a mill stone around our necks. The reverse of the proposition is also true; as we advance the masses in intelligence and the means of acquiring information and pecuniary reward for labor, will the civilization of all be increased. Hence, as an individual, I welcome all classes to the profession of which I am a member and would make but one requirement: Do you believe you are qualified for it and can do better in it than in any other position in life!

"Entertaining these views, I rejoice that dentistry, tho the youngest of the professions, has welcomed women to two of our

State organizations to full membership and have recognised her as a co-laborer in a field full of interest, and one in my judgment, to which she is well adapted. * * * Have not all parents who fail to give their daughter a profession or trade neglected one of the plainest requirements of life? Certainly. The world is full of misery on that account. I am sick of that cant and hypocrisy that would prevent women doing anything to earn her daily bread, and then call it a dispensation of Providence when she is left to support a family by spending her days and nights over the needle. Let your daughters enter the professions or anything they can earn a livelihood at, and regard it as a dispensation of Providence that he has in His wisdom given your daughters brains enough to take a position in life superior to that you, possibly, have ever been able to fill."

Two years after this address was delivered, (in 1868) a Mrs. Henrietta Hirschfeld presented herself as a candidate at this College. She came from Berlin, Germany, and had been instructed that women were admitted to all our colleges. She had had great difficulty in getting the consent of her Government to study and would hardly have succeeded in this, but for the aid of high officials. It was then no wonder she was nearly crushed by the vote of the faculty, rejecting her. To the honor of Professor Buckingham be it said, that he subsequently changed his vote, and she was finally matriculated, but even then was obliged to take her anatomy in the Women's Medical College, as Professor Forbes refused to have her in his class. This decision he changed in the second year, and allowed her to attend. It is needless to say that she graduated with honor and with the entire respect of her class, and is yet in large practice in Berlin. She was at that time supposed to be the first woman graduate, but at the same year a lady graduated at the Ohio, and is still, it is believed, in practice in Lawrence, Kansas. These two led the advance guard that has since so largely increased that at the present time all the large towns in Germany have women dentists, and many of our own cities.

The College closed its doors for some time to women but finally permitted three, Misses Jacoby and Wilkie, of Germantown, and Miss Anna D. Rambuger, of Philadelphia, to matriculate. At the close of the first year they refused to continue them as students. Dr. Truman appealed from this decision to the Board of Trustees of the College, and personally advocated their cause before that body. This repetition created a great sensation in the city—the *Press* taking up the matter and ventilating it thoroughly. It was finally left to the decision of a Committee of the Board of Trustees, of which the late Judge Peirce was chairman. He made a very full report, and one that had all the force of a judicial decision. It was his belief that the faculty must

reinstate the women and graduate them. This was very reluctantly acceded to, and two of them eventually received their degree at this institution, the other at Baltimore. This practically ended, for the time, the education of women in Eastern colleges, and it was not renewed till the subject of the sketch wrote from Hanover Seminary to the Pennsylvania College Dental Surgery, making application for two ladies. Prof. Peirié, then and now Dean, at once accepted them; and from that day to this, this College has the honor of being the leading dental school, in this or any other country, in the training of women dentists.

Dr. Truman tried to impress his views in this important matter whenever it was possible to do so, and at one of the meetings of the American Dental Association, held at Saratoga, introduced and advocated the importance of recognizing women in the profession. This was respectfully received, and, no doubt, had its influence.

John A. Crawford, a traveling salesman for the meat-packing firm of Blooming, Wolf & Co., of Quincy, Ill., while taking a drink of water swallowed his artificial teeth. Crawford was on a freight train at Jamestown, just west of Trenton, Mo., when the accident happened. The train was stopt, and, after an hour's vain endeavor to recover the teeth, the patient was brought to Trenton, where Drs. Madden, Hendrickson, and Patton made an examination, and pronounced it a very serious case. Crawford's throat and chest were terribly swollen and inflamed, and his case was a critical one. Owing to the swollen condition of the patient's throat, the doctors were unable to locate the plate, and it was feared he would die. Mrs. Crawford was notified, and arrived only in time to see her husband die.—*Exchange.*

A Health Exhibition of the American Public Health Association will be held at Brooklyn, N. Y., October 22, 23, 24 and 25, 1889.

This Association comprises over eight hundred members, all devoted, officially or otherwise, to its declared purpose—the advancement of sanitary science and the promotion of organizations and measures for the practical application of public hygiene. In the furtherance of this purpose it has met annually, during the last sixteen years, in different cities of the United States and Canada, and has in every instance had the effect of greatly stimulating public effort in the promotion of health and measures for its maintenance.

With the hope of still further magnifying this interest and effort, it is the purpose of the Association, through its local committee, at the forthcoming meeting, to provide an exhibition of everything available adapted to the promotion of health.

PROF. J. E. CRAVENS, D.D.S.

(SEE FRONTISPIECE.)

Prof. Cravens was born in 1844. He served in the Union army from 1861 to 1865, coming out as captain. He entered the dental profession in 1871. From that time till 1875 he practiced in Kansas City, when he removed to Indianapolis and became one of the projectors of the Indiana Dental College, which opened in 1879. Dr. Cravens was made Secretary and one of its Professors, in which capacities he has remained ever since. For three years he has been Secretary of the National Association of Dental Faculties.

The doctor is now about to sever his professional ties on this side of the water, and join Dr. E. A. Bogue in the practice of dentistry in Paris. It will be the good wishes of the whole American profession that much success goes with both of them.

Our readers are undoubtedly familiar with the terrors of that dread affliction of childhood—croup. The sudden attack, coming generally in the dead of night to distress the child and terrify the parents, cannot be described with the vividness of the reality. We have had opportunity to witness the almost magical effect of a remedy lately introduced and known as croupine, and advertised in this issue of ITEMS. In the interest of suffering children we take pleasure in calling attention to its merits, and would advise every parent to always have a package of croupine in the house for ready use. J. F. FRANTZ, M. D.

THE INDIANA DENTAL COLLEGE.

This College has done well since its beginning in 1879; but has been especially successful for the last few years. It now gives promise of still farther usefulness by establishing a specialty of Crown and Bridge-Work, with Professor T. S. Hacker in the chair. It is also adding to ordinary Prosthetic instruction, the ripe experience and unusual skill of Professor L. P. Haskell, of Chicago. With the enterprise these and other features, which this College projects exhibits, it commends itself to the special patronage of the profession.

The First District Dental Society of the State of New York will hold its twenty-first anniversary in New York City, January 14, 15, and 16, 1890, on which occasion every practising dentist will be cordially invited. Special railroad and hotel rates will be made. Please note date of meeting and make your appointments accordingly.

All communications should be addressed to the Executive Committee, W. W. Walker, chairman, 67 West Ninth street, New York City.

Miscellaneous.

HAVE A SPECIALTY.

The sooner people begin to comprehend that practically there is no business, calling, trade or profession which any one man can master in all its branches in a lifetime, the better will it be for every individual's prosperity. We believe half the failures in the great struggle for livelihood are due to men trying to do too much, trying to fulfil all the requirements indicated by a name because their fathers did; but forgetting that, in their father's time, that name included an aggregate of labor of very different extent to that which it now encompasses. Every day, as it closes, leaves the world richer in knowledge, and the aggregation of many days produces a store of learning which increases vastly the quantity which the beginner must master ere he approaches proficiency. A couple of centuries ago all the world knew of the healing art was within the easy grasp of any average intellect. Now there is no physician living, however eminent, who pretends to have mastered, or even to be moderately versed in all the details of medicine and surgery. So it is with science, with law, with mechanics, with journalism, till each calling has reduced itself to an agglomeration of specialties; and, without doubt, each specialty in the future will be divided and subdivided as learning and education advance.

That which is true of the professions is equally true of the trades. The lawyers say that the man most to be dreaded as an adversary is "he of one book." The individual who knows only one thing, but that root and branch, is unquestionably abler and wiser than another who has dabbled in this and that till his mind is but a jumble of ill-assorted ideas, superficial at the best. If a mechanic, for example, finds there is any one operation for which he has a special liking, and can accomplish it just a little better than anything else, that is the thing for him to stick to. He should make up his mind to cling to it through thick and thin, to try and improve every part till a uniform perfection is attained. It does not take the world very long to discover who is the best man for this or that purpose; and when it finds out that man who has made a specialty of one operation, and unquestionably does it better than anybody else, the world must avail itself of his labor, and, in so doing, must pay him his own terms.

We do not mean to argue that a man should be, like a horse, capable of entertaining but one idea at a time, for that would be to advocate narrow-mindedness; but we do mean to say that no man should be without one essential and prevailing object, in the prosecution of which he is determined to excel, and it does not make any difference what that is, whether cleaning a gutter or saving lives. We should liken this uppermost purpose in a man's brain to an elaborate treatise on one subject alone in a library of general encyclopedias. The last indicate the expansion and grasp of one's views on all things, the first their concentration on a life work. The simile is all the more apt, for, after all, when we come to examine everything we know outside our one calling, we find we are only in possession of a copious index. And we are led to the conclusion that the very best we can ever hope to do

in the attainment of knowledge is to learn where this fact or that theory is to be found most readily when we wish to inform ourselves as to its signification. The wider a man's education the bigger his index; and perhaps we may safely say that one of the cardinal differences between the educated and uneducated is that the former are capable of instantly selecting the proper means of refreshing their memory, while the latter might spend days in search of it.

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All this adds weight to our first advice: to have a specialty and push it. Be sure you are right before you select it. We do not believe any man can rise to eminence in a calling which he dislikes, and herein lie the oft-repeated mistakes of parents in forcing children into trades and professions against the latter's inclinations. A boy who has a feeling for art, who spends every moment with paint and brush, will chafe under coarse mechanical labor; while another whose delight is in his tool-chest will rebel against the slavery of books and brain-work. Both, when they become their own masters, will eventually abandon their distasteful tasks; and it is only a question of their continuity of purpose whether they become "rolling stones," drifting from one business into another all their days, or workers, firm and steadfast, because buoyed by a constant sense of enjoyment of their chosen labors.

Intermittent toil is wasted effort; so also are attempts to manage two or three different pursuits at once. There must be one definite aim, and toward this every thot must be concentrated, for nothing is more certain than that fame, wealth and happiness are the rewards of only those who

> "Still advancing, still pursuing,
> Learn to labor and to wait."

—*Scientific American.*

An amusing incident came to our notice at the recent reopening of the Phœnix Mills, at Dartford, by Messrs. Burroughs, Wellcome & Co., of Snow-hill, London. Floral and other decorations were prepared, and everything that could possibly add to the brightness and comfort of visitors was done. On the morning of the opening day, Dr. Saxton, late of Philadelphia, U. S. A., who is now attached to the staff of the firm, remarked to the manager of the works that it was a pity that the newly-planted rose-trees were not contributing to the gaiety of the scene. The manager acquiesced, with the additional remark that "it could not be helped." "Oh, yes it can—I'll make 'em bloom," said the doctor as he walked away. In the afternoon the rose-trees were the admiration of everyone, and the Vicar of Dartford, who took the chair, in notifying the wonderful transformation which had come over the mills since the firm had taken to them, illustrated his remarks by referring to the sudden blooming of the rose-trees. The doctor, on leaving the manager in the morning, went and bought a basketful of the finest blooms that Dartford nurserymen could supply, and with the help of some very fine wire the trees were made to bloom for the occasion, as, perhaps, they would not have done, except in the presence of a 'cute American. In order to prevent discovery by visitors plucking the roses, a supply of cut roses was distributed liberally amongst the ladies.

A few days ago Collector Harris, who is a nephew of Jay Gould, died suddenly at the Frontenac Hotel on the St. Lawrence river. The cause of his death was heart disease, which was brought on by excessive indulgence in cigarette smoking.

Imitation Ebony.—Wash any compact wood with a boiling decoction of logwood three or four times, allowing it to dry between each application. Then wash it with a solution of acetate of iron, which is made by dissolving iron filings in vinegar. This stain is very black, and penetrates to a considerable depth into the wood, so that ordinary scratching or chipping does not show the original color.

Tea Adulterations for the American Market.—Consul Crowell, of Amoy, reports that a large portion of the Amoy oolong tea is poorly cultivated, picked, and dried; that it is dirty and adulterated, and was called "stuff" in the last year's report of the Amoy Commissioner of Customs, who added that it "was alone wanted in America." This last, the consul says, is true; for nearly the entire crop of Amoy oolongs—bad and unfit often for use as they are—are annually marketed in the United States, and, he thinks, the American public ought to be warned and protected against this so-called tea.—*Boston Medical and Surgical Journal.*

A New Cement, for securing iron into stone, is described in some of the foreign papers. The cement is made by melting resin and stirring in brick dust, which must be finely ground and sifted, until a sort of putty is formed, which, however, runs easily while hot. In using, the iron is set into the hole in the stone prepared to receive it, and the melted putty poured in, until the space is filled; then, if desired, bits of brick, previously warmed, may be pushed into the mass, and a little of the cement thereby saved. As soon as the whole is cool the iron will be firmly held to the stone, and the cement is quite durable and uninjured by the weather, while, unlike lead and sulphur, it has no injurious effect on the iron.—*Scientific American.*

Economy in Student Life.—The New York *Sun* says that twelve medical students found a suite of rooms on the top floor of an east side building, which they divided into sleeping apartments and study rooms. They were comfortably housed and excellently, though plainly fed, at a cost of $3.33 each per week. They exchanged among themselves the costlier books of reference necessary for their studies, and organized themselves into a society. Rigid discipline was maintained, and a duty was prescribed for every hour of the day. In the evening and early morning they were regularly quizzed by one of their number specially selected each week for that purpose, on the lessons of the coming day, and the spare hours were devoted to study and review. Among the members there were three honor men in the examinations, last spring, and there promises to be several more of the same class at the end of the winter's season.